

## PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

REC'D 13 MAY 2005

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference OP03-0088	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/KR2003/001796</b>	International filing date (day/month/year) <b>02 SEPTEMBER 2003 (02.09.2003)</b>	Priority date (day/month/year) <b>03 JANUARY 2003 (03.01.2003)</b>
International Patent Classification (IPC) or national classification and IPC <b>IPC7 A23L 1/015</b>		
Applicant <b>JUNG, Mun Yhung et al</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand <b>07 JULY 2004 (07.07.2004)</b>	Date of completion of this report <b>20 APRIL 2005 (20.04.2005)</b>
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer <b>KIM, Tae San</b> Telephone No. 82-42-481-5633

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/001796

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

 the international application as originally filed the description:pages 1-22, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_ the claims:pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages 23-25, filed with the letter of 7 March, 2005 the drawings:pages 1/1, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_ the sequence listing part of the description:pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4.  The amendments have resulted in the cancellation of: the description, pages \_\_\_\_\_ the claims, Nos. 1-10 \_\_\_\_\_ the drawings, sheets \_\_\_\_\_

## 5.

 This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/001796

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	11-23	YES
	Claims	none	NO
Inventive step (IS)	Claims	11-23	YES
	Claims	none	NO
Industrial applicability (IA)	Claims	11-23	YES
	Claims	none	NO

**2. Citations and explanations (Rule 70.7)**

Reference is made to the following documents:

D1: FDA's Food Advisory Committee, "Formation of Acrylamide in Food" by Lauren Jackson, 4 Dec. 2002

D2: Nature vol.419 pp448-449 "Acrylamide is formed in the Maillard reaction" et al. 3 Oct. 2002

According to the amendment dated on 07 March 2005, claims 1-10 are deleted, since those claims has not been regarded as being inventive over D1 (see slide no. 19) in the first written opinion dated on 06 January 2005.

Claim 11 is substantially the same as that before the amendment, though it is differently described. Accordingly, claim 11 is considered inventive as disclosed in said first written opinion. Claims 12-23 are also inventive since they are dependent on claim 11.

[The first written opinion dated on 06 January 2005]

D1 discloses that the lower the pH is, the less the amount of acrylamide produced from the reaction of reduced saccharide and asparagine is. In addition, a person skilled in the art can easily consider the art of decreasing generation of acrylamide by rendering amino group in asparagine non-nucleophilic with heightened hydrogen ion concentration in the reaction group, and the use of a pH depressor. Accordingly the disclosure in claims 1-8 is not inventive.

Though the definition of the possible lowest pH of claim 9 and the definition of composition ratio of added pH depressor of claim 10 are not disclosed in D1 and D2, the meaning of those definition is not disclosed concretely in detailed description and the effect thereby comes within the expected range. Thus, claims 9-10 are not inventive.